

Altova DiffDog Server 2019

User and Reference Manual

Altova DiffDog Server 2019 User & Reference Manual

All rights reserved. No parts of this work may be reproduced in any form or by any means - graphic, electronic, or mechanical, including photocopying, recording, taping, or information storage and retrieval systems - without the written permission of the publisher.

Products that are referred to in this document may be either trademarks and/or registered trademarks of the respective owners. The publisher and the author make no claim to these trademarks.

While every precaution has been taken in the preparation of this document, the publisher and the author assume no responsibility for errors or omissions, or for damages resulting from the use of information contained in this document or from the use of programs and source code that may accompany it. In no event shall the publisher and the author be liable for any loss of profit or any other commercial damage caused or alleged to have been caused directly or indirectly by this document.

Published: 2018

© 2018 Altova GmbH

Table of Contents

1	Altova DiffDog Server 2019	7
1.1	How It Works	9
2	Installation	12
2.1	Linux	12
2.1.1	Installing DiffDog Server	12
2.1.2	Viewing Currently Installed Products	13
2.1.3	Uninstalling DiffDog Server	13
2.2	OS X / macOS	15
2.2.1	Installing DiffDog Server	15
2.2.2	Uninstalling DiffDog Server	16
2.3	Windows	17
2.3.1	Installing DiffDog Server	17
2.3.2	Configuring Windows Service Settings	18
3	Configuring the Server	22
3.1	Configuring the Server for Remote Comparisons	23
3.2	Restricting Access to Server Paths	25
3.3	Server Configuration File	26
3.4	Client Configuration File	29
3.5	Starting and Stopping Services (Linux)	36
3.6	Starting and Stopping Services (OS X / macOS)	37
3.7	Starting and Stopping Services (Windows)	38
4	Running Comparisons	40
4.1	Comparing Word Documents	42
4.2	Handling the Output	43
4.3	Viewing Comparison Results	44
5	DiffDog Server Command Line	48

5.1	assignlicense (Windows only)	50
5.2	createconfig	52
5.3	debug	53
5.4	help	54
5.5	install	56
5.6	licenseserver	57
5.7	start	59
5.8	uninstall	60
5.9	verifylicense (Windows only)	61

6	DiffDog Client Command Line	64
----------	------------------------------------	-----------

6.1	aliases	65
6.2	diff	66
6.3	import	79
6.4	showcfg	81

Index	83
--------------	-------	-----------

Chapter 1

Altova DiffDog Server 2019

1 Altova DiffDog Server 2019

DiffDog Server is a powerful differencing software solution that enables you to compare text and XML files, directories (including ZIP format), as well as URLs, across Windows, Linux, and Mac OS X systems.

Main Features

- *Command-line Interface.* DiffDog Server runs as a service. You can run comparisons by invoking DiffDog Server either from the command line interface or through executable scripts.
- *Run comparisons remotely.* You can compare files either directly on the server machine where DiffDog Server is installed, or call a comparison remotely from a client machine. The DiffDog Server installation includes a portable DiffDog Command Line Client, which can be copied to multiple machines within your organization, thus enabling you to call a running DiffDog Server remotely.
- *Cross-platform:* DiffDog clients may run on either Linux, Mac OS X, or Windows, and the same is true for DiffDog Server.
- *URL Comparisons.* In addition to files and directories, you can also compare URLs. For example, you can compare a page like **<http://www.example.org/page1.html>** with **<http://www.example.org/page2.html>**. Combinations between URL and files are also possible, for example, **<http://www.example.org/page1.html>** with **C:\page2.html**.
- *Three-way comparisons.* In addition to standard two-side comparisons that involve a "left" file and a "right" side, you can also perform three-way comparisons (when comparing files). This is useful, for example, when two different versions exist of the same original file, and you need to cross-compare all versions.
- *Word document comparisons.* Comparison of Microsoft Word 2003 or later documents (.docx, .dotx) is also supported. Microsoft Word is not required to be installed in order to perform such comparisons.
- *Binary, text, and XML.* Depending on the kind of files you are comparing, you can choose between any of the following comparison modes: binary, text, or XML. Alternatively, you can let the application detect the comparison mode automatically based on file extension. For even more advanced needs, you can create custom rules to choose a specific mode automatically based on file extension.
- *Advanced filters and comparison options.* You can flexibly include or exclude files or directories from a comparison by means of filters. Additional options are available that help you deal with case-sensitive versus insensitive comparisons, ignoring files based on size or modification time, as well as various ways to treat special characters like spaces, tabs, or carriage returns.
- *Integration with DiffDog desktop.* If you have already created comparison files (such as .filedif and .dirdif files) in DiffDog (<https://www.altova.com/diffdog>), you can compare them in a server environment as well. This enables you to automate or integrate frequently-used comparisons into your custom scripts or processes. On Windows, any custom XML or directory filters that you have created in DiffDog can also be invoked as command line options when you run a comparison with the DiffDog Command Line Client executable.

Limitations

- The connection between client and server is currently unencrypted (plain HTTP).

System Requirements

Windows	Windows 7 SP1 with Platform Update, Windows 8, Windows 10
Windows Server	Windows Server 2008 R2 SP1 with Platform Update or newer
Linux	<ul style="list-style-type: none">• CentOS 6 or newer• RedHat 6 or newer• Debian 8 or newer• Ubuntu 14.04 or newer
(Mac) OS X, macOS	OS X 10.10, 10.11, macOS 10.12 or newer

On Windows, DiffDog Server is available both as a 32-bit and 64-bit package.

Last updated: 08 October 2018

1.1 How It Works

After installation, the DiffDog Server files are copied to the default program installation directory.

<i>Windows</i>	<code>C:\Program Files\Altova\DiffDogServer2019\</code>
<i>Linux</i>	<code>/opt/Altova/DiffDogServer2019/</code>
<i>OS X / macOS</i>	<code>/usr/local/Altova/DiffDogServer2019/</code>

The program installation directory contains two executables that you will work with:

1. DiffDog Server executable, available in the **bin** subdirectory. This executable provides configuration-related commands, including commands for licensing DiffDog Server, starting it as a service, or resetting it to the default configuration.
2. DiffDog Command Line Client executable, available in the **cmdlclient** subdirectory. This executable provides the `diff` command (among other commands). The `diff` command is the most important command, and you can use it to run comparisons between any of the following: files, directories, or URLs.

In this documentation, the DiffDog Command Line Client executable is alternatively referred to as "DiffDogCmdlClient".

To begin, let's open a command line terminal and run a simple command that returns the current version of DiffDog Server:

<i>Windows</i>	<code>"C:\Program Files\Altova\DiffDogServer2019\bin\DiffDogServer" --version</code>
<i>Linux</i>	<code>/opt/Altova/DiffDogServer2019/bin/diffdogserver --version</code>
<i>OS X / macOS</i>	<code>/usr/local/Altova/DiffDogServer2019/bin/diffdogserver --version</code>

Let's now run an actual comparison between two local files. This time, make sure that you call the `DiffDogCmdlClient` (not `server`) executable with the `diff` command, as follows:

<i>Windows</i>	<code>"C:\Program Files\Altova\DiffDogServer2019\cmdlclient\DiffDogCmdlClient.exe" diff file1.txt file2.txt</code>
<i>Linux</i>	<code>/opt/Altova/DiffDogServer2019/cmdlclient/bin/diffdogcmdlclient diff file1.txt file2.txt</code>
<i>OS X / macOS</i>	<code>/usr/local/Altova/DiffDogServer2019/cmdlclient/bin/diffdogcmdlclient diff file1.txt file2.txt</code>

Note that, for the sake of simplicity, this documentation omits the full path to the executable when describing commands. Therefore, instead of the command above, this documentation uses:

```
DiffDogCmdlClient diff file1.txt file2.txt
```

The command above is very simple and assumes that:

- The current working directory is the program directory.
- The files **file1.txt** and **file2.txt** exist in the program directory (otherwise, refer to them using an absolute or a relative path).
- DiffDog Server and DiffDog Command Line Client both run on the same machine.

Note the following:

- To call the executable (either client or server) just by name, without the full path, add the program installation directory to your system's PATH variable. Alternatively, run the `cd` command and change to the directory where the executable is.
- On Linux, use an all-lowercase to call the executable. In addition, on Linux and OS X/macOS, when you are inside the directory of the executable, you might need to add the prefix `./` before the name of the executable.

DiffDog Command Line Client can run either on the same machine as DiffDog Server, or on a different machine. When installed on another machine, the client is capable of communicating with a remote DiffDog Server through HTTP. Consequently, the `diff` command can compare not only file or directory paths local to the client, but also paths on the remote machine where DiffDog Server runs. You can also compare a client-side file or directory with a remote server-side file or directory, or vice versa. Moreover, the client and the server can be on different operating systems (for example, the client may be running on Windows and the server on Linux). The advantage of such a setup is that it enables you to run comparisons from virtually any client configured to communicate with the server. For instructions about how to configure the server to accept calls from remote clients, see [Configuring the Server](#).

The `diff` command provides a large number of additional options for advanced comparison needs, for example:

- You can specify whether files should be compared as text, XML, or binary files.
- You can create custom rules that let you automatically set a comparison mode (text, XML, binary) based on file extension.
- When two directories are compared, you can specify whether file contents are to be compared also.
- You can specify whether the file size or modification date should be ignored or taken into account when comparing files.
- When you compare text files, you can specify rules to exclude from the comparison files that match a certain name pattern.
- When you compare XML files, you can specify rules to exclude from the comparison certain XML elements and attributes.
- You can specify how the comparison results are to be generated. For example, you can redirect the comparison result (output) either to a file on the server, or to a file on the client. Regardless of the option chosen, you can additionally view the output on screen. The comparison results can be either in text or in XML format.

This is not an exhaustive list; for reference to all available comparison options, see the [diff](#) command reference.

Chapter 2

Installation

2 Installation

2.1 Linux

2.1.1 Installing DiffDog Server

System requirements

▼ Linux

- CentOS 6 or newer
- RedHat 6 or newer
- Debian 8 or newer
- Ubuntu 14.04 or newer

The following libraries are required as a prerequisite to install and run the application. If the packages below are not already available on your Linux machine, run the command `yum` (or `apt-get` if applicable) to install them.

Required by	CentOS, RedHat	Debian	Ubuntu
LicenseServer	krb5-libs	libgssapi-krb5-2	libgssapi-krb5-2

Prerequisites

- Perform installation either as **root** user or as a user with **sudo** privileges.
- The previous version of DiffDog Server must be uninstalled before a new one is installed.

Installing DiffDog Server

1. Download the installation package from <https://www.altova.com/download#server> to a local directory.
2. Change to the directory where you downloaded the installation package, for example:

```
cd /home/User/Downloads
```

3. Install the DiffDog Server package.

```
[Debian, Ubuntu]  sudo dpkg --install diffdogserver-2019-debian.deb
[CentOS, RedHat]  sudo rpm -ivh diffdogserver-2019-1.x86_64.rpm
```

Note: You may need to adjust the name of the package above to match the current release or service pack version.

4. Start the DiffDog Server service.

```
[CentOS 6]:      sudo initctl start diffdogserver
```

```
[CentOS 7]:      sudo systemctl start diffdogserver
[Debian 8]:      sudo systemctl start diffdogserver
[RedHat 6]:      sudo initctl start diffdogserver
[RedHat 7]:      sudo systemctl start diffdogserver
[Ubuntu 14.04]: sudo initctl start diffdogserver
[Ubuntu 16.04]: sudo systemctl start diffdogserver
```

Licensing DiffDog Server

1. Ensure that the latest version of Altova LicenseServer (<https://www.altova.com/licenseserver>) is installed and running either on the local machine or network.
2. Register DiffDog Server with Altova LicenseServer. For this, you need to know either the host name or the IP address of the computer where LicenseServer runs. For example, if LicenseServer runs on 127.0.0.1, you can register it as follows:

```
sudo diffdogserver licenseserver 127.0.0.1
```

Note: The command above assumes you are calling the executable from the program installation directory. On CentOS and OS X, make sure to prepend "./" in front of the executable.

3. Log on to LicenseServer administration interface and assign the license to the machine where DiffDog Server runs.

For more information about licensing, refer to Altova LicenseServer documentation (<https://www.altova.com/documentation>).

2.1.2 Viewing Currently Installed Products

To check if an Altova server product is installed:

- Run the following command:

```
[Debian, Ubuntu]  dpkg --get-selections | grep server
[CentOS, RedHat]  rpm -qa | grep server
```

2.1.3 Uninstalling DiffDog Server

To uninstall DiffDog Server:

- Run the following command:

```
[Debian, Ubuntu]  sudo dpkg --remove diffdogserver
[CentOS, RedHat]  sudo rpm -e diffdogserver
```

If you need to uninstall other packages, use the same command as above and supply the package you want to remove as argument. For example:

```
[Debian, Ubuntu] sudo dpkg --remove licenseserver  
[CentOS, RedHat] sudo rpm -e licenseserver
```

2.2 OS X / macOS

2.2.1 Installing DiffDog Server

System requirements

▼ *(Mac) OS X, macOS*

OS X 10.10 or newer

Prerequisites

- Perform installation as a user with administrative (root) privileges.

Installing DiffDog Server

1. Download the disk image (.dmg) file from the Altova Download Center (<https://www.altova.com/download>) and click to open it. Once you do this, the installer appears as a new drive on your computer.
2. Double-click the package (.pkg) file, and go through the successive steps of the installation wizard. These are self-explanatory and include one step in which you have to agree to the license agreement before being able to proceed. When you complete the wizard, the DiffDog Server icon becomes available in **Applications**. The package is installed in the directory **/usr/local/Altova/DiffDogServer2019/**.
3. If you have not installed Altova License Server already, or if you want to upgrade to the latest version, double-click the corresponding package (.pkg) file and follow the on-screen instructions.
4. Start DiffDog Server as a service.

```
sudo launchctl load /Library/LaunchDaemons/  
com.altova.DiffDogServer.plist
```

Licensing DiffDog Server

1. Ensure that the latest version of Altova LicenseServer (<https://www.altova.com/licenseserver>) is installed and running either on the local machine or network.
2. Register DiffDog Server with Altova LicenseServer. For this, you need to know either the host name or the IP address of the computer where LicenseServer runs. For example, if LicenseServer runs on 127.0.0.1, you can register it as follows:

```
sudo diffdogserver licenseserver 127.0.0.1
```

3. Log on to LicenseServer administration interface and assign the license to the machine where DiffDog Server runs.

For more information, refer to Altova LicenseServer documentation (<https://www.altova.com/documentation>).

2.2.2 Uninstalling DiffDog Server

To uninstall DiffDog Server:

1. Stop the DiffDog Server service.

```
sudo launchctl unload /Library/LaunchDaemons/  
com.altova.DiffDogServer.plist
```

To check whether a service has been stopped, open the Activity Monitor terminal and make sure that the service is not in the list. Double-check that the Activity Monitor shows all processes, not just "My processes" (On the **View** menu, click **All processes**.)

2. In **Applications**, right-click the DiffDog Server icon and select **Move to Trash**. Note that your DiffDog Server installation directory and configuration data are not removed by this step.
3. Optionally, if you want to remove the DiffDog Server installation directory as well, run the following command:

```
sudo rm -rf /usr/local/Altova/DiffDogServer2019/
```

Note: The steps above do not remove the configuration data from `/var/Altova/DiffDogServer2019`. Be aware that once the configuration data is removed, it cannot be recovered later.

2.3 Windows

2.3.1 Installing DiffDog Server

System requirements

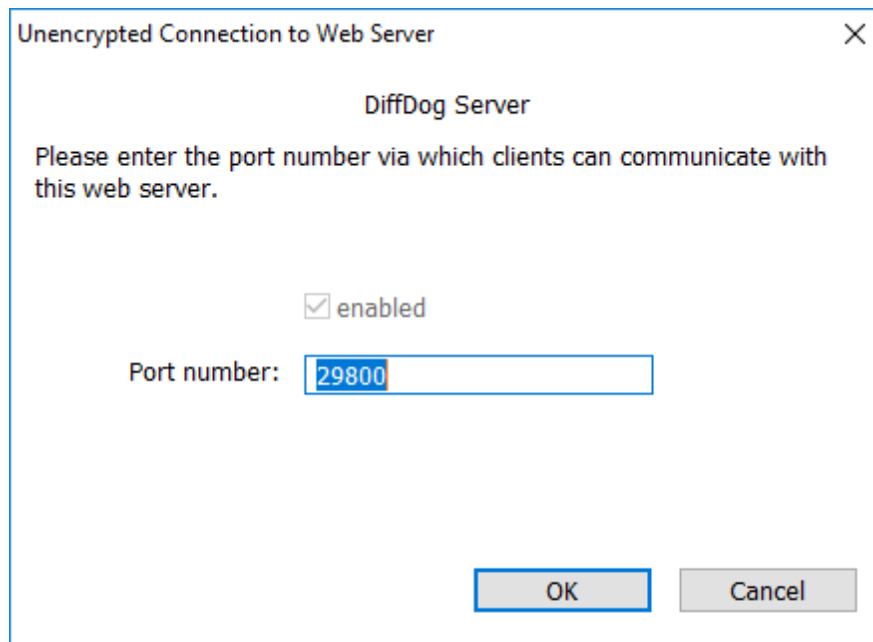
- Windows 7 SP1 with Platform Update, Windows 8, Windows 10
- Windows Server 2008 R2 SP1 with Platform Update or newer


Prerequisites

- Perform installation as a user with administrative privileges.

Installing DiffDog Server

1. Download the installation file from the Altova Download Center (<https://www.altova.com/download>) and run it.
2. Optionally, select the installation language from the box in the lower left area of the wizard, and click **Next**. If necessary, you can change the language later from the command line.
3. Do one of the following:
 - a. If you haven't installed Altova LicenseServer yet, leave the default settings as is. The wizard will install the latest version of Altova LicenseServer on the computer where you are running the wizard.
 - b. If you haven't installed Altova LicenseServer yet and want to install Altova LicenseServer on another computer, clear the **Install Altova LicenseServer on this machine** check box, and then choose **Register Later**. In this case, you will need to install Altova LicenseServer and register DiffDog Server separately.
 - c. If Altova LicenseServer has already been installed on your computer but it has a lower version than the one indicated by the installation wizard, leave the default settings as is. In this case, the installation wizard will automatically upgrade your LicenseServer version with the one indicated on the dialog box. Note that the existing registration and licensing information will be preserved after the upgrade.
 - d. If Altova LicenseServer has already been installed on your computer or network, and if it has the same version as the one indicated by the wizard, do the following:
 - i. Clear the **Install Altova LicenseServer on this machine** check box.
 - ii. Under **Register this product with**, choose the Altova LicenseServer instance on which you want to register DiffDog Server, or choose **Register later**.
4. Click **Next**.
5. Optionally, define the port number on which HTTP clients can communicate with DiffDog Server. You can also change this setting later, see [Configuring the Server](#).



6. Optionally, define the Windows service configuration applicable to DiffDog Server. For more information, see [Configuring Windows Service Settings](#).
7. Follow the wizard instructions to complete the installation. When the installation completes, the Altova ServiceController icon () is added in the system notification area.

Licensing DiffDog Server

1. Ensure that the latest version of Altova LicenseServer (<https://www.altova.com/licenseserver>) is installed and running either on the local machine or network.
2. If you haven't done so already during installation, register DiffDog Server with Altova LicenseServer. For this, you need to know either the host name or the IP address of the computer where LicenseServer runs. For example, if LicenseServer runs on 127.0.0.1, you can register it as follows:

```
DiffDogServer.exe licenseserver 127.0.0.1
```

3. Log on to LicenseServer administration interface and assign the license to the machine where DiffDog Server runs.

For more information, refer to Altova LicenseServer documentation (<https://www.altova.com/documentation>).

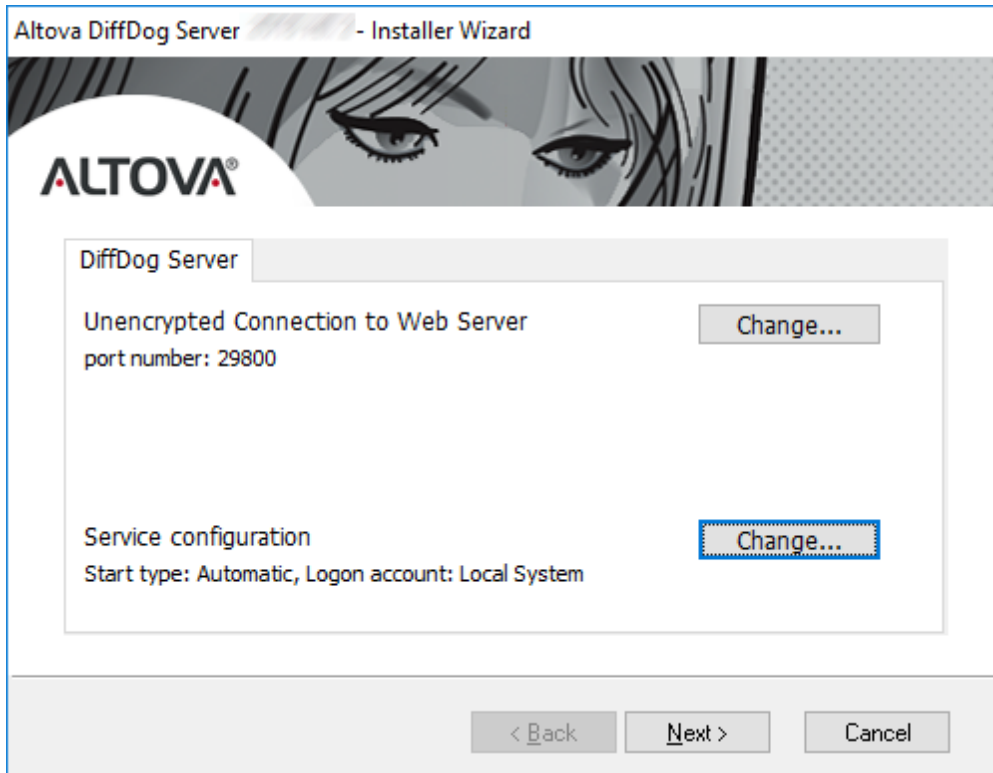
2.3.2 Configuring Windows Service Settings

During the installation of DiffDog Server on a Windows operating system, it is possible to configure the following settings:

- How should DiffDog Server start up as a Windows service: automatic, on demand, delayed automatic, or disabled.

- The operating system user account to be used by DiffDog Server as a Windows service: **Local System**, **Local Service**, **Network Service**, or **Other User**.
- If DiffDog Server is configured to run as **Other User**, you can set the username and password of this user, similar to how this is done in the Windows Services management console.

The settings have the same meaning as when you change the service properties from the Windows Services management console. To define the settings above during installation, click **Change** next to **Service configuration**.



If you need to change these settings after installation, open the Windows Services management console, and then change the properties of the required service from there. To open the Windows Services management console, open a command line window and type `Services.msc`.

Chapter 3

Configuring the Server

3 Configuring the Server

Configuration of DiffDog Server involves setting the server configuration file—one such file in .ini format exists on the server machine in the application data directory:

<i>Linux</i>	<code>/var/opt/Altova/DiffDogServer</code>
<i>Mac</i>	<code>/var/Altova/DiffDogServer</code>
<i>Windows 7, 8, 10</i>	<code>C:\ProgramData\Altova\DiffDogServer</code>

For typical scenarios where configuration of the server is required, see [Configuring the Server for Remote Comparisons](#) and [Restricting Access to Server Paths](#).

In addition, if you want to use DiffDog Server for remote comparisons, a client configuration file, also in .ini format, must be configured on each client machine that connects to DiffDog Server remotely.

You can change the settings available in configuration files by editing the files in a text editor. For reference to all settings available in these files, see:

- [Server Configuration File](#)
- [Client Configuration File](#)

After editing the server configuration file, restart DiffDog Server as a service.

For information about restarting DiffDog Server as a service, see:

- [Starting and Stopping Services \(Linux\)](#)
- [Starting and Stopping Services \(OS X/ macOS\)](#)
- [Starting and Stopping Services \(Windows\)](#)

3.1 Configuring the Server for Remote Comparisons

To enable remote DiffDog Clients to call DiffDog Server, take the following steps:

1. On the server machine, make sure that DiffDog Server is installed, licensed and running (see [Setup on Windows](#), [Setup on Linux](#) and [Setup on macOS](#)).
2. On the server machine, define the HTTP host and port where DiffDog Server should be listening for client requests. By default, DiffDog Server is configured to listen to HTTP connections on the address and port specified in a [server configuration file](#). By editing the server configuration file, you can specify a different address and port. To make DiffDogServer accept incoming connections from other machines, ensure that the `http.socket-host` parameter is set to **0.0.0.0**.

Ensure that the host and port on the server machine are not blocked by the firewall. For example, on a Windows server, you can let an application through the firewall by editing the rules available in **Control Panel\All Control Panel Items\Windows Defender Firewall\Advanced Settings\Inbound Rules**.

3. Restart DiffDog Server as a service. For instructions, see:
 - [Starting and Stopping Services \(Linux\)](#)
 - [Starting and Stopping Services \(OS X/ macOS\)](#)
 - [Starting and Stopping Services \(Windows\)](#)
4. Do one of the following:
 - a. If the client machine runs on the same operating system and platform as the server machine, locate the **cmdlclient** subdirectory of the program installation directory and copy it to the client machine. You will find this directory at the following path:

<i>Windows</i>	<code>C:\Program Files\Altova\DiffDogServer2019\cmdlclient</code>
<i>Linux</i>	<code>/opt/Altova/DiffDogServer2019/cmdlclient</code>
<i>OS X/ macOS</i>	<code>/usr/local/Altova/DiffDogServer2019/cmdlclient</code>

At minimum, you should copy the executable and the .ini configuration file available in the same directory; other files are optional. If you intend to call DiffDog Server remotely from more than one client machine, then copy the **cmdlclient** directory to each client machine that needs to call DiffDog Server.

- b. If the client machine runs on a different operating system or platform than the server machine, take the following steps:
 - a) Download the server installation package from the Altova download page (<https://www.altova.com/download>) and install it on the client operating system. After installation, you will find the client files in the **cmdlclient** subdirectory relative to the program installation directory.
 - b) Copy the **cmdlclient** subdirectory to another location and uninstall the server package

from the client machine.

5. On the client machine, edit the [client configuration file](#) so that it points to the address and port where DiffDog Server listens for HTTP requests. For example, let's assume that DiffDog Server listens on **192.0.2.0** and port **29800**. In this case, edit the client configuration file so that `server.host` and `server.port` parameters have these respective values.

On the client machine, you are now ready to call the remote DiffDog Server in order to compare some files or directories. For example, the command below will compare `path\to\my\file1.txt` on the client with `path\to\my\file2.txt` on the server, using text comparison mode. Note that, in order for `diff` command to work correctly, these file paths must actually exist on the client and server machine, respectively.

```
diffdogcmdlclient diff --client-left=path\to\client\file.txt --server-
right=path\to\server\file.txt --mode=text
```

When you run the command, DiffDog Client reads the connection details from the client configuration file, connects to DiffDog Server, and performs the comparison. As stated before, the configuration file must point to a host and port where DiffDog Server is up and running, and listens for HTTP requests.

Troubleshooting

The following table lists common problems that you might encounter, and their solution.

Problem	Solution
On running the DiffDogCmdlClient.exe on Windows, an error message is displayed at the command line: "This version is not compatible with the version of Windows you're running. Check your computer's system information and then contact the software publisher".	This may occur if you run a 64-bit executable on a 32-bit operating system. See step 4b above for a solution.
On running the <code>diff</code> command, an error message is displayed at the command line: "Unknown error processing the command line".	Ensure that paths on the server are supplied with the help of <code>--server-left</code> or <code>--server-right</code> options. Likewise, ensure that paths on the client are supplied with the <code>--client-left</code> or <code>--client-right</code> options.
On running the <code>diff</code> command, an error message is displayed at the command line: "Server is restricting file access to aliases, but client didn't specify an alias name".	Specify the --alias command line option.

3.2 Restricting Access to Server Paths

For security reasons, administrators can optionally configure DiffDog Server to restrict server paths accessible to clients that connect to the server machine. For example, if server paths are restricted, a comparison such as the one below (which compares a file on the client with one on the server) would no longer be allowed by default:

```
diffdogcmdlclient diff --client-left=path\to\client\file.txt --server-  
right=path\to\server\file.txt --mode=text
```

When server paths are restricted, clients must always specify the option `--alias` when running a comparison that includes server paths. An alias is a designated directory on the server machine where remote comparisons are allowed. Any server paths outside of the alias directory are not accessible to remote clients and cannot be included in comparisons.

On the server machine, administrators can restrict server paths as follows:

1. Open the [server configuration file](#).
2. Set the option `restrict-to-aliases = true`.
3. For each directory that must be considered an alias, add an **[alias]** configuration key, for example:

```
restrict-to-aliases = true  
  
[alias:sandbox1]  
path = C:\Public\Comparisons  
  
[alias:sandbox2]  
path = D:\Comparisons
```

4. Restart DiffDog Server as a service.

Clients can now run a comparison that include either **sandbox1** or **sandbox2** as command line option. Specifically, if the path **C:\Public\Comparisons\file.txt** exists on the server, a client can refer to it as follows:

```
diffdogcmdlclient diff --client-left=path\to\client\file.txt --server-  
right=file.txt --mode=text --alias=sandbox1
```

A client can always view the list of aliases available on the server by running the [aliases](#) command.

3.3 Server Configuration File

After installation, DiffDog Server contains a server configuration file called **server_config.ini** located in the application data directory. The application data directory depends on the operating system:

<i>Linux</i>	<code>/var/opt/Altova/DiffDogServer</code>
<i>Mac</i>	<code>/var/Altova/DiffDogServer</code>
<i>Windows 7, 8, 10</i>	<code>C:\ProgramData\Altova\DiffDogServer</code>

To create a DiffDog Server configuration file with the default configuration settings, run the [createconfig](#) command.

The server configuration file includes the following options.

Option	Description
<code>hide-alias-paths</code>	<p>An alias is a directory path on the server that clients are allowed to access when performing remote comparisons. This option controls the level of detail that clients can see when they run the aliases command. It is meaningful if the <code>restrict-to-aliases</code> option is set to true. Valid values:</p> <p>False Allow clients to view the list of aliases defined on the server along with the paths to which each alias points.</p> <p>True Allow clients to view just the list of aliases defined on the server; do not show any paths.</p> <p>See also: Restricting Access to Server Paths</p>
<code>http.access-file</code>	Defines the name and location of the HTTP access log file. The access file contains information about access-related activity. It contains information that is useful for resolving connection issues.
<code>http.environment</code>	<p>Sets the environment (development or production). The development production allows for easier debugging compared to the production one. Valid values:</p> <p>production Set environment to production.</p> <p>development Set environment to development.</p>
<code>http.error-file</code>	Defines the name and location of the HTTP error file. The error file contains errors related to traffic to and from the server. If there are connection problems, this file can provide useful information towards resolving them.
<code>http.log-screen</code>	If you started DiffDog Server with the command <code>debug</code> , and if this option is set to true , then server activity is displayed in the

Option	Description
	command line console. Otherwise, server activity is not displayed. The log screen is displayed in addition to the writing of log files.
<code>http.socket-host</code>	Defines the address (HTTP interface) on which DiffDog Server should listen for HTTP requests. This should be an IP address from one of the network interfaces configured at the machine or the name localhost . To have DiffDog Server listen on all interfaces, set this value to 0.0.0.0 . If it should listen for local requests only, set this value to 127.0.0.1 .
<code>http.socket-port</code>	Defines the port on which DiffDog Server should listen for HTTP requests.
<code>language</code>	Specifies the language of the command line interface. Valid values are <code>en</code> , <code>de</code> , <code>es</code> , <code>fr</code> , <code>ja</code> (English, German, Spanish, French, and Japanese).
<code>restrict-to-aliases</code>	Restricts access to server paths for remote clients connecting to DiffDog server. Valid values: True Access to server paths is restricted. If you set this value, then at least one [alias:<identifier>] must be defined in the configuration file as well, see below. Any server paths outside of the alias directory are not accessible to remote clients and cannot be included in comparisons. False Access to server paths is not restricted.
<code>server.log-file</code>	Defines the name and location of the server's log file. This file contains general activity events logged by the server, including licensing events.
<code>server.output-root-dir</code>	Specifies the directory where the output of all submitted jobs is saved.
<code>server.unrestricted-filesystem-access</code>	When set to True (the default value), output files are written directly to the location specified by the user (possibly overwriting existing files of the same name). Setting the value to True is meaningful if the client and server are on the same machine and you want to write the output files to any directory on that machine. When set to False , output files are written to the output directory (see the <code>server.output-root-dir</code> option).

[alias:<identifier>]

An alias is a directory path on the server that clients are allowed to access when performing remote comparisons. Creating aliases is meaningful if the option `restrict-to-aliases=true`. When `restrict-to-aliases=true`, clients must always specify the `--alias` option when running a comparison that includes server paths. For an example, see [Restricting Access to Server Paths](#).

You can create multiple aliases, for example `[alias:name1]`, `[alias:name2]`, and so on. The name of each alias must be unique. An alias can have only one option: `path`.

Option	Description
<code>path</code>	The path to the directory that DiffDog Command Line clients are allowed to access on the server.

For example, the following configuration creates an alias called **sandbox** for the directory **C:\Public**.

```
[alias:sandbox]
path = C:\Public

restrict-to-aliases = true
```

3.4 Client Configuration File

A client-side configuration file defines various configuration settings that affect comparisons and connectivity between DiffDog Command Line Client and a remote DiffDog Server. You must typically edit the client configuration file in order to achieve the following:

- Set up the communication between DiffDog Command Line Client and a remote DiffDog Server. In this case, the `server.address` and `server.port` parameters in the client configuration file must point to the machine where DiffDog Server runs.
- Change the language of the command line interface (for the client).
- Set default values for various options when you run a comparison. For example, if you don't specify a comparison mode (binary, text) when comparing files, the application will use the default comparison mode as it is configured in the client configuration file.
- Define XML filters. An XML filter is useful when you are comparing XML files. It lets you ignore attributes or elements with a specific name during comparison.
- Define directory filters. When you compare directories, a directory filter lets you include or ignore files or directories that follow a specific pattern.
- Other configuration options, as further described below.

If you do not need the functionality above, there is no need to set up a client configuration file. Otherwise, you can find a sample client configuration file in the **cmdlclient** subdirectory relative to the program installation directory; it is called **client_config.ini.sample**. To set up your custom configuration file, create a copy of **client_config.ini.sample** and remove the **.sample** part from the file name.

When you run a comparison, you can set the path to the custom configuration file by setting the `--c` option. If you do not set the `--c` option, the DiffDog Command Line Client executable attempts to read the client configuration file from the same directory. If there is no configuration file in the same directory as the executable, the default values as described in the command line help and this documentation apply.

To view the current configuration, run the [showcfg](#) command.

The client configuration file includes the options listed below.

[general]

Option	Description
<code>language</code>	Specifies the language of the command line interface (for the client). Valid values are en, de, es, fr, ja (English, German, Spanish, French, and Japanese).
<code>server.address</code>	Specifies the address of the remote host where DiffDog Server is listening for HTTP requests.
<code>server-alias</code>	If the server administrator has restricted access to server paths for security reasons, you can no longer run comparisons that refer server file paths directly, see also Restricting Access to Server Paths . Instead, you need to specify the name of an alias by means of the <code>--alias</code> option. Alternatively, you can set the <code>server-alias</code> option in the client

Option	Description
	<p>configuration file, so that you don't have to enter it at the command line. For example, the following configuration defines a default alias called sandbox:</p> <pre>server-alias=sandbox</pre> <p>Note: If you set the <code>--alias</code> option at the command line, it takes precedence over the value in the configuration file.</p>
<code>server.port</code>	Specifies the remote port where DiffDog Server is listening for HTTP requests.
<code>zip-as-dir</code>	When you run the <code>diff</code> command without setting the --zip-as-dir option, the executable will look for it in this configuration file. Set here the default preferred value for this option.
<code>whitespace-mode</code>	When you run the <code>diff</code> command without setting the --whitespace-mode option, the executable will look for it in this configuration file. Set here the default preferred value for this option.

[file-types]

When you run the `diff` command without specifying a comparison mode through the `--mode` option (text, binary, or XML), the application decides the comparison mode automatically for each file based on extension (that is, `--mode=auto`). In the options below, you can define what file extensions should be treated as text, binary, or XML, whenever the comparison mode is not explicitly set.

Option	Description
<code>text</code>	A comma-separated list of file extensions that are treated as text by default.
<code>xml</code>	A comma-separated list of file extensions that are treated as XML by default.
<code>binary</code>	A comma-separated a list of file extensions that are treated as binary by default.

[xml]

Option	Description
<code>ignore-namespace</code>	When you run the <code>diff</code> command without setting the --xml-ignore-namespace option, the executable will look for it in this configuration file. Set here the default preferred value for this option.
<code>ignore-prefixes</code>	When you run the <code>diff</code> command without setting the --xml-ignore-prefixes option, the executable will look for it in this configuration file. Set here the default preferred value for this option.

Option	Description
resolve-entities	When you run the <code>diff</code> command without setting the <code>--xml-resolve-entities</code> option, the executable will look for it in this configuration file. Set here the default preferred value for this option.
ignore-text	When you run the <code>diff</code> command without setting the <code>--xml-ignore-text</code> option, the executable will look for it in this configuration file. Set here the default preferred value for this option.
ignore-case-in-names	When you run the <code>diff</code> command without setting the <code>--xml-ignore-case-in-names</code> option, the executable will look for it in this configuration file. Set here the default preferred value for this option.
ignore-case-in-text	When you run the <code>diff</code> command without setting the <code>--xml-ignore-case-in-text</code> option, the executable will look for it in this configuration file. Set here the default preferred value for this option.
ignore-markup-attributes	When you run the <code>diff</code> command without setting the <code>--xml-ignore-markup-attributes</code> option, the executable will look for it in this configuration file. Set here the default preferred value for this option.
ignore-markup-cdata	When you run the <code>diff</code> command without setting the <code>--xml-ignore-markup-cdata</code> option, the executable will look for it in this configuration file. Set here the default preferred value for this option.
ignore-markup-comments	When you run the <code>diff</code> command without setting the <code>--xml-ignore-markup-comments</code> option, the executable will look for it in this configuration file. Set here the default preferred value for this option.
ignore-markup-processing-instructions	When you run the <code>diff</code> command without setting the <code>--xml-ignore-markup-processing-instructions</code> option, the executable will look for it in this configuration file. Set here the default preferred value for this option.
ignore-markup-doctype-decls	When you run the <code>diff</code> command without setting the <code>--xml-ignore-markup-doctype</code> option, the executable will look for it in this configuration file. Set here the default preferred value for this option.
ignore-markup-xml-decls	When you run the <code>diff</code> command without setting the <code>--xml-ignore-markup-xml</code> option, the executable will look for it in this configuration file. Set here the default preferred value for this option.
order-by-elements	When you run the <code>diff</code> command without setting the <code>--xml-order-by-elements</code> option, the executable will look for it in this configuration file. Set here the default preferred value for this option.
order-by-attributes	When you run the <code>diff</code> command without setting the <code>--xml-order-by-attributes</code> option, the executable will look for it in this configuration file. Set here the default preferred value for this option.
order-by-text	When you run the <code>diff</code> command without setting the <code>--xml-order-by-text</code> option, the executable will look for it in this configuration file. Set here the default preferred value for this option.
order-by-list	When you run the <code>diff</code> command without setting the <code>--xml-order-by-attribute-list</code> option, the executable will look for it in this configuration

Option	Description
	file. Set here the default preferred value for this option. This must be a named list of attributes defined in the [xml.orderby<name-of-my-list>] group (see below).

[xml.orderby:<identifier>]

This option group represents a named list of XML attributes. When an XML comparison takes place, such a list will cause the XML elements to be ordered by specific attributes before comparison. For an example, see the [--xml-order-by-attribute-list](#) option. You can create multiple attribute lists, for example *[xml.orderby:list1]*, *[xml.orderby:list2]*, and so on. The name of each attribute list must be unique.

Option	Description
attributes	Enter here the attribute by which XML elements must be ordered before comparison, for example: attributes = myattribute You can also specify a comma-separated list of XML attributes, for example: attributes = attr1, attr2, attr3

[xml.filter:<identifier>]

This option group represents a filter that lets you ignore attributes or elements with a specific name during comparison. You can create multiple such option groups, for example *[xml.filter:filter1]*, *[xml.filter:filter2]*, and so on. The name of each option group must be unique.

Option	Description
ignore-elements	Enter here a comma-separated list of XML elements that should be ignored when this filter is active.
ignore-attributes	Enter here a comma-separated list of XML attributes that should be ignored when this filter is active.
ignore-both	Enter here a comma-separated list of XML elements or attributes that should be ignored when this filter is active.

Once you define a filter in the configuration file, you can supply it at the command line using the [--xml-filter](#) option.

[text]

Option	Description
ignore-case	When you run the <code>diff</code> command without setting the --ignore-case option, the executable will look for it in this configuration file. Set here the

Option	Description
	default preferred value for this option.
ignore-blank-lines	When you run the <code>diff</code> command without setting the --ignore-blank-lines option, the executable will look for it in this configuration file. Set here the default preferred value for this option.

[dir]

Option	Description
ignore-case	When you run the <code>diff</code> command without setting the --dir-ignore-case option, the executable will look for it in this configuration file. Set here the default preferred value for this option.
compare-file-content	When you run the <code>diff</code> command without setting the --dir-compare-contents option, the executable will look for it in this configuration file. Set here the default preferred value for this option.
compare-sizes	When you run the <code>diff</code> command without setting the --dir-compare-sizes option, the executable will look for it in this configuration file. Set here the default preferred value for this option.
compare-modification-times	When you run the <code>diff</code> command without setting the --dir-compare-mod-times option, the executable will look for it in this configuration file. Set here the default preferred value for this option.
ignore-modtime-interval	When you run the <code>diff</code> command without setting the --dir-compare-mod-times-ignore-seconds option, the executable will look for it in this configuration file. Set here the default preferred value for this option.

[dir.filter:<identifier>]

This option group represents a filter that lets you include or ignore files or directories that follow a specific pattern. At the command line, you can specify directory filters using the [--directory-filter](#) option. In the configuration file, you can create multiple such option groups, for example `[dir.filter:filter1]`, `[dir.filter:filter2]`, and so on. The name of each option group must be unique. Each option group can contain one or more of the following options:

Option	Description
ignore-files	A list of file extensions that should be excluded from the comparison (ignored) when this filter is active.
ignore-dirs	A list of directory names that should be excluded from the comparison (ignored) when this filter is active.
include-dirs	A list of directory names that should be included in the comparison when this filter is active.
include-files	A list of file extensions that should be included in the comparison when this filter is active.

Option	Description
include-archive-files	Windows-specific. Set this value to true if archive files should be included in the filter; false otherwise.
include_hidden_dirs	Windows-specific. Set this value to true if hidden directories should be included in the filter; false otherwise.
include_hidden_files	Windows-specific. Set this value to true if hidden files should be included in the filter; false otherwise.
include-readonly-files	Windows-specific. Set this value to true if read-only files should be included in the filter; false otherwise.
include_system_dirs	Windows-specific. Set this value to true if system directories should be included in the filter; false otherwise.
include_system_files	Windows-specific. Set this value to true if system files should be included in the filter; false otherwise.

Note that the application contains a few built-in directory filters (and you don't need to create them since they will be recognized even if you didn't define them in the configuration file). You can however alter the definition of these filters in the configuration file, in which case your filter will override the built-in configuration. The built-in filters are as follows:

Filter identifier	Purpose
xml	<p>When this filter is active and a directory comparison is performed, files with the following extensions are included in the comparison: *.biz, *.cml, *.dcd, *.dtd, *.ent, *.fo, *.math, *.mml, *.mtx, *.rdf, *.smil, *.svg, *.tld, *.tsd, *.vml, *.vxml, *.wml, *.wsdl, *.xbrl, *.xdr, *.xhtml, *.xml, *.xsd, *.xsl, *.xslt.</p> <p>On Windows, read-only and archive files are included in the comparison.</p>
text	<p>When this filter is active and a directory comparison is performed, only files with the following extensions are included in the comparison: *.asp, *.c, *.cc, *.cpp, *.cs, *.css, *.cxx, *.h, *.hpp, *.htm, *.html, *.java, *.jsp, *.rc, *.tlh, *.tli, *.txt.</p> <p>On Windows, read-only and archive files are included in the comparison.</p>
nobinary	<p>When this filter is active and a directory comparison is performed, files with the following file extensions are ignored: a.out, *.a, *.avi, *.bmp, *.chm, *.com, *.dll, *.doc, *.docm, *.docx, *.dot, *.dotm, *.dotx, *.exe, *.gif, *.gz, *.hlp, *.ico, *.ilk, *.jar, *.jpeg, *.jpg, *.lib, *.mdb, *.mid, *.mp2, *.mp3, *.mp4, *.mpeg, *.msi, *.o, *.obj, *.ogg, *.pdb, *.pdf, *.png, *.pps, *.ppt, *.pptx, *.rar, *.snd, *.so, *.tar, *.tif, *.tiff, *.tlb, *.ttf, *.wav, *.wma, *.wmf, *.wmv, *.xls, *.xlsx, *.zip</p>
cvs	<p>When this filter is active and a directory comparison is performed, files with the following file extensions are ignored: .#*, .cvsignore, .cvsrc, .cvswrappers, .cvspass, .rhos</p>

Filter identifier	Purpose
	<p>ts. Also, any directory with the name <code>CVS</code> is ignored.</p> <p>On Windows, read-only and archive files are also included in the comparison.</p>
svn	<p>When this filter is active and a directory comparison is performed, any directory with the name <code>.svn</code> is ignored.</p> <p>On Windows, read-only and archive files are included in the comparison.</p>
git	<p>When this filter is active and a directory comparison is performed, any directory with the name <code>.git</code> is ignored. Also, any file with the name <code>.gitignore</code> is ignored.</p> <p>On Windows, read-only and archive files are included in the comparison.</p>

3.5 Starting and Stopping Services (Linux)

To start the service:

```
[CentOS 6]:      sudo initctl start diffdogserver
[CentOS 7]:      sudo systemctl start diffdogserver
[Debian 8]:      sudo systemctl start diffdogserver
[RedHat 6]:      sudo initctl start diffdogserver
[RedHat 7]:      sudo systemctl start diffdogserver
[Ubuntu 14.04]: sudo initctl start diffdogserver
[Ubuntu 16.04]: sudo systemctl start diffdogserver
```

To stop the service:

```
[CentOS 6]:      sudo initctl stop diffdogserver
[CentOS 7]:      sudo systemctl stop diffdogserver
[Debian 8]:      sudo systemctl stop diffdogserver
[RedHat 6]:      sudo initctl stop diffdogserver
[RedHat 7]:      sudo systemctl stop diffdogserver
[Ubuntu 14.04]: sudo initctl stop diffdogserver
[Ubuntu 16.04]: sudo systemctl stop diffdogserver
```

3.6 Starting and Stopping Services (OS X / macOS)

To start the service:

```
sudo launchctl load /Library/LaunchDaemons/  
com.altova.DiffDogServer.plist
```


To stop the service:

```
sudo launchctl unload /Library/LaunchDaemons/  
com.altova.DiffDogServer.plist
```


3.7 Starting and Stopping Services (Windows)

By default, the DiffDog Server services are automatically started when Windows starts. Follow the instructions below if you need to manage services manually.

To start the service:

- Click the ServiceController icon () in the system notification area, and then select **Altova DiffDog Server > Start service**.

To stop the service:

- Click the ServiceController icon () in the system notification area, and then select **Altova DiffDog Server > Stop service**.

You can also start or stop the DiffDog Server services using the Microsoft Management Console (found under Control Panel > Administrative Tools > Services).

Chapter 4

Running Comparisons

4 Running Comparisons

To compare only local files or directories, supply them as arguments to the `diff` command. In this case, if you supply two arguments (for example, two file paths) to the `diff` command, the arguments will be interpreted in the following order: left side of the comparison, right side of the comparison.

```
DiffDogCmdlClient diff file1.txt file2.txt --mode=text
```

If you specify three arguments, a three-way comparison takes place, and the arguments are interpreted in this order: left side of the comparison, middle side, and then right side.

```
DiffDogCmdlClient diff file1.xml file2.xml file3.xml --mode=xml
```

Note: While not mandatory, for best results it is recommended to explicitly set the `--mode` option to either `text`, `binary`, or `xml`. Otherwise, the application would need to determine automatically whether you are comparing files or directories, which may lead to undesired results. In the first example above, the comparison mode is set to `text` since two text files are being compared. In the second example, it is set to `xml` since three XML files are being compared.

Alternatively, you can specify the left and right side of the comparison through options instead of arguments. For example, the command below compares two XML files on the machine where DiffDog Client runs, and both file paths are supplied as options (not arguments):

```
DiffDogCmdlClient diff --client-left=file1.xml --client-right=file2.xml
```

When the comparison paths are set as options, you can compare not only files local to the client machine, but also remote files on the machine where DiffDog Server runs. For example, the command below compares two text files where the left one is on the client and the right one is on the server.

```
DiffDogCmdlClient diff --client-left=file1.txt --server-right=file2.txt
```

Note: The path syntax must be valid for the operating system where the file is. For example, if the client runs on Windows and the server runs on Linux, then a Windows-style path must be used for `--client-left`. Conversely, a Linux-style path must be used for `--server-right`.

To perform a three-way comparison, add a third option (either `--client-middle` or `--server-middle`, depending on where the common ancestor file is). In the example below, the common ancestor file `file2.csv` is on the server machine while the left and right files (`file1.csv`, `file3.csv`) are on the client machine.

```
DiffDogCmdlClient diff --client-left=file1.csv --server-middle=file2.csv --client-right=file3.csv
```


If the server administrator has restricted access to server paths for security reasons, you can no longer run comparisons that refer server file paths directly, see also [Restricting Access to Server Paths](#). Instead, you need to specify the name of an alias by means of the `--alias` option.

For example, the command below compares a file on the client with a file on the server. It is assumed that an alias called "public" has already been defined by an administrator on the server.

```
DiffDogCmdlClient diff --client-left=file1.txt --server-right=file2.txt --  
mode=text --alias=public
```

To query the list of aliases defined on the server, run the [aliases](#) command. To save an alias as default, set the `server-alias` option in the [Client Configuration File](#). This way, you will no longer need to specify an alias at the command line.

Note: Alias names are case-sensitive.

4.1 Comparing Word Documents

You can use DiffDog Server to compare Microsoft Word 2003 or later documents (.docx, .dotx). Microsoft Word is not required to be installed in order to perform such comparisons.

To compare Word documents, invoke the `diff` command similar to how this is done for plain or XML text files, for example:

```
DiffDogCmdlClient diff "C:\Reports.docx" "C:\ReportsWithFeedback.docx" --mode=doc
```

Note: In the command above, `DiffDogCmdlClient` stands for the path of the DiffDog Command Line Client executable, see [How It Works](#).

As best practice, set the `--mode=doc` option in order to instruct DiffDog Server to treat the compared files as Word documents.

When comparing Word documents, you can choose whether formatting information such as bold, italic, font size and color should be ignored or taken into account. The `diff` command provides the following options for that purpose:

- [--doc-format-bold, --dfb](#)
- [--doc-format-font-color, --dfc](#)
- [--doc-format-font-name, --dff](#)
- [--doc-format-font-size, --dfs](#)
- [--doc-format-italic, --dfi](#)
- [--doc-format-underline, --dfu](#)

When set to **true**, any of the options above will take into account text with the respective formatting.

In addition, you can set the following options when comparing Word documents:

- [--doc-ignore-blank-lines, --dib](#)
- [--doc-ignore-case, --doc](#)
- [--doc-whitespace-mode, --dws](#)

4.2 Handling the Output

When you run a comparison, you can view the comparison result directly at the command line, or output it to a report in XML or text format. Set the `--output-mode` option to specify the output format. For example, the following command compares two text files using text comparison mode (that is, `--mode=text`) and displays the output as text at the command line:

```
DiffDogCmdlClient diff a.txt b.txt --mode=text --output-mode=text
```

To redirect the output to a file, set the `--output-file` option. For example, the following command compares two text files using text comparison mode (that is, `--mode=text`). The output report will be in XML format and it will be redirected to **out.xml** file:

```
DiffDogCmdlClient diff a.txt b.txt --mode=text --output-mode=xml --output-file=out.xml
```

Note: The option `--output-mode=text` is not supported when comparing XML files. If you set the `--output-mode` to **text** when comparing XML files, no differences will be reported in the standard output. If you additionally set the `--output-file` option, a zero-sized output file will be created.

By default, the output report containing comparison results is displayed at the command line, unless you set the option `--quiet=true`.

Binary files

When you compare files in binary mode (that is, when the option `--mode=binary`), DiffDog Server creates no output report, since listing differences is not meaningful for binary files. In such cases, check the `%ERRORLEVEL%` environment variable to view the comparison outcome.

Error level	Meaning
0	Files are equal
1	Differences exist
2	An error has occurred

For example, the following Windows batch script compares two PDF files in binary mode. The `%ERRORLEVEL%` environment variable outputs the comparison outcome.

```
DiffDogCmdlClient diff "C:\book1.pdf" "C:\book2.pdf" --m=binary  
ECHO %ERRORLEVEL%
```

4.3 Viewing Comparison Results

Whenever you run a comparison using the `diff` command and supply the `--output-mode=text` option, a text report with comparison results is generated. Likewise, if you supply the option `--output-mode=xml`, an XML report with comparison results is generated.

By default, the report containing comparison results is displayed at the command line, unless you set the option `--quiet=true`. To save the report to an output file, set the `--output-file` option, see also [Handling the Output](#).

XML report

To understand how differences are reported in XML format, let's assume that the following two XML files must be compared side-by-side:

<pre><book id="1"> <author>Mark Twain</author> </book></pre>	<pre><book id="2"> <author>Franz Kafka</author> </book></pre>
--	---

If you compare these two files with the command

```
DiffDogCmdlClient diff file1.xml file2.xml --mode=xml --output-mode=xml --
output-file=report.xml
```

then the resulting XML report would look similar to the one below:

```
<?xml version="1.0" encoding="UTF-8"?>
<!-- Differencing export generated by Altova DiffDog Server -->
<diff_result>
  <diff_info comparison_mode="xml">
    <source_left name="c:\file1.xml" uri="file:///c:/file1.xml"/>
    <source_right name="c:\file2.xml" uri="file:///c:/file2.xml"/>
  </diff_info>
  <xml_diff>
    <left_location>
      <parent xpath="/book"/>
      <position>1</position>
    </left_location>
    <right_location>
      <parent xpath="/book"/>
      <position>1</position>
    </right_location>
    <left_content>
      <attribute id="1"/>
    </left_content>
    <right_content>
      <attribute id="2"/>
    </right_content>
  </xml_diff>
```

```
<xml_diff>
  <left_location>
    <parent xpath="/book/author"/>
    <position>1</position>
  </left_location>
  <right_location>
    <parent xpath="/book/author"/>
    <position>1</position>
  </right_location>
  <left_content>
    <element>Mark Twain</element>
  </left_content>
  <right_content>
    <element>Franz Kafka</element>
  </right_content>
</xml_diff>
</diff_result>
```

Example XML report

At the very top, the XML report contains a **diff_info** element. The **diff_info** element supplies information about files that were compared (including the comparison mode used, and the path of the compared files). This element occurs only once.

Next, all the encountered differences (two, in this example) are listed by means of multiple **xml_diff** elements. In the context of each difference, the **left_location** (and **right_location**, correspondingly) inform you where the difference was encountered, as an XPath expression. The **left_content** (and **right_content**, correspondingly) inform you about the exact element or attribute that is changed.

Chapter 5

DiffDog Server Command Line

5 DiffDog Server Command Line

This topic:

- [Default location of DiffDog Server executable](#)
- [Usage and list of CLI commands](#)

Default location of DiffDog Server executable

Given below are the default locations of the DiffDog Server executable:

```
Windows <ProgramFilesFolder>\Altova\DiffDogServer2019\bin
        \DiffDogServer.exe

Linux   /opt/Altova/DiffDogServer2019/bin/diffdogserver

Mac     /usr/local/Altova/DiffDogServer2019/bin/diffdogserver
```

Usage and list of CLI commands

General command line syntax for DiffDogServer is:

```
diffdogserver --h | --help | --version | <command> [options] [arguments]
```

▼ Casing and slashes on the command line

`DiffDogServer` on Windows
`diffdogserver` on Unix (Linux, Mac)

- * Note that lowercase (`diffdogserver`) works on all platforms (Windows, Linux, and Mac), while upper-lower (`DiffDogServer`) works only on Windows and Mac.
- * Use forward slashes on Linux and Mac, backslashes on Windows.

where

<code>--h --help</code>	Displays the help text.
<code>--version</code>	Displays the version of DiffDog Server.

Valid CLI commands are listed below and are explained in the sub-sections of this section.

assignlicense	Upload a license to LicenseServer and assign it to DiffDog Server on this machine.
createconfig	Resets the server configuration file to default settings.
debug	Starts DiffDog Server for debugging (not as a service).

help	Displays help for a specific command. For example: <code>help run</code>
install	Installs DiffDog Server as a service.
licenseserver	Register DiffDog Server with LicenseServer on the local network.
start	Starts DiffDog Server as a service.
uninstall	Uninstalls DiffDog Server as a service.
verifylicense	Check if the current DiffDog Server is licensed; optionally, check if a given license key is assigned.

5.1 assignlicense (Windows only)

On execution, the `assignlicense` command uploads the license file specified by the `FILE` argument to the registered LicenseServer, and assigns the license to DiffDog Server on this machine. The `FILE` argument takes the filepath of the license file. The `--test-only` option allows you to upload to LicenseServer and validate the license, without assigning the license to DiffDog Server. For details about licensing, see the LicenseServer documentation (<https://www.altova.com/documentation>).

Note: This command is supported only on Windows systems. It is not supported on Linux or Mac systems.

Syntax

```
DiffDogServer assignlicense [options] FILE
```

▼ Casing and slashes on the command line

`DiffDogServer` on Windows

`diffdogserver` on Unix (Linux, Mac)

* Note that lowercase (`diffdogserver`) works on all platforms (Windows, Linux, and Mac), while upper-lower (`DiffDogServer`) works only on Windows and Mac.

* Use forward slashes on Linux and Mac, backslashes on Windows.

Argument	Description
File	The path to the license file

Option	Description
<code>--t</code> , <code>--test-only</code>	Values are <code>true false</code> . If <code>true</code> , then the license file is uploaded to LicenseServer and validated, but not assigned. If the option is specified without a value, then it is set to a value of <code>true</code> .
<code>--h</code> , <code>--help</code>	Displays information about the command

Options are listed in their short forms (if available) and long forms. You can use one or two dashes for both short and long forms. An option that takes a value is written like this: `--option=value`.

Note: On Windows systems: Avoid using the end backslash and closing quote on the command line `\`, for example, as in: `"C:\My directory\"`. These two characters are interpreted by the command line parser as a literal double-quotation mark. Use the double backslash `\\` if spaces occur in the command line and you need the quotes (for example: `"C:\My Directory\\"`). Alternatively, try to avoid using spaces and, therefore, quotes at all.

Examples

Examples of the `assignlicense` command:

```
diffdogserver assignlicense C:\DiffDog Server12345.altova_licenses
diffdogserver assignlicense --test-only=true C:\DiffDog
Server12345.altova_licenses
```

- The first command above uploads the specified license to LicenseServer and assigns it to DiffDog Server.
- The second command uploads the specified license to LicenseServer and validates it, without assigning it to DiffDog Server.

5.2 createconfig

This command creates a server configuration file with default settings for all options. Note that running this command without specifying the `--force` option will overwrite any existing configuration file. If you do not want that, set the `--force` option to `false`. For more information about the configuration file, see [Server Configuration File](#).

Syntax

```
diffdogserver createconfig [options]
```

▼ Casing and slashes on the command line

`DiffDogServer` on Windows
`diffdogserver` on Unix (Linux, Mac)

* Note that lowercase (`diffdogserver`) works on all platforms (Windows, Linux, and Mac), while upper-lower (`DiffDogServer`) works only on Windows and Mac.
 * Use forward slashes on Linux and Mac, backslashes on Windows.

Option	Description
<code>--f, --force</code>	Values are <code>true false</code> . If <code>true</code> , then any existing server configuration file will be overwritten. If <code>false</code> , then a new server configuration file will be created only if one doesn't exist already. The default value is <code>true</code> .
<code>--lang</code>	Sets the value of the <code>language</code> parameter in the configuration file. Valid values are: <code>en, es, de, fr, ja</code> .
<code>--h, --help</code>	Displays information about the command

Options are listed in their short forms (if available) and long forms. You can use one or two dashes for both short and long forms. An option that takes a value is written like this: `--option=value`.

Examples

To create a default configuration file and set the command line interface language to German, use:

```
diffdogserver createconfig --lang=de
```

5.3 debug

The `debug` command starts DiffDog Server for debugging—not as a service. To stop DiffDog Server in this mode, press **Ctrl+C**. The command takes no options.

Syntax

```
diffdogserver debug [options]
```

▼ Casing and slashes on the command line

`DiffDogServer` on Windows

`diffdogserver` on Unix (Linux, Mac)

* Note that lowercase (`diffdogserver`) works on all platforms (Windows, Linux, and Mac), while upper-lower (`DiffDogServer`) works only on Windows and Mac.

* Use forward slashes on Linux and Mac, backslashes on Windows.

Option	Description
<code>--h, --help</code>	Displays information about the command

Options are listed in their short forms (if available) and long forms. You can use one or two dashes for both short and long forms. An option that takes a value is written like this: `--option=value`.

Examples

Example of the `debug` command:

```
diffdogserver debug
```

5.4 help

The `help` command takes a single argument (*Command*): the name of the command for which help is required. It displays the correct syntax of the command and other information relevant to the correct execution of the command.

Syntax

```
diffdogserver help [options] Command
```

▼ Casing and slashes on the command line

```
DiffDogServer on Windows
diffdogserver on Unix (Linux, Mac)
```

* Note that lowercase (`diffdogserver`) works on all platforms (Windows, Linux, and Mac), while upper-lower (`DiffDogServer`) works only on Windows and Mac.
* Use forward slashes on Linux and Mac, backslashes on Windows.

Argument	Description
Command	The name of the command for which you want help information

Option	Description
<code>--h</code> , <code>--help</code>	Displays information about the command

Options are listed in their short forms (if available) and long forms. You can use one or two dashes for both short and long forms. An option that takes a value is written like this: `--option=value`.

Examples

An example of the `help` command:

```
diffdogserver help licenseserver
```

The command above contains one argument: the command `licenseserver`, for which help is required. When the example command above is executed, information about the `licenseserver` command will be displayed in the terminal.

The `--help` option

Help information about a command is also available by using the `--help` option with the command for which help information is required. For example: Using the `--help` option with the `licenseserver` command, as follows:

```
diffdogserver licenseserver --help
```

achieves the same result as does using the `help` command with an argument of `licenseserver`:

```
diffdogserver help licenseserver
```

In both cases, help information about the `licenseserver` command is displayed.

5.5 install

The `install` command installs DiffDog Server as a service on the server machine. Note that installing DiffDog Server as a service does not automatically start the service. To start the service, use the [start](#) command. To uninstall DiffDog Server as a service, use the [uninstall](#) command.

Syntax

```
diffdogserver install [options]
```

▼ Casing and slashes on the command line

`DiffDogServer` on Windows

`diffdogserver` on Unix (Linux, Mac)

* Note that lowercase (`diffdogserver`) works on all platforms (Windows, Linux, and Mac), while upper-lower (`DiffDogServer`) works only on Windows and Mac.

* Use forward slashes on Linux and Mac, backslashes on Windows.

Option	Description
<code>--h, --help</code>	Displays information about the command

Options are listed in their short forms (if available) and long forms. You can use one or two dashes for both short and long forms. An option that takes a value is written like this: `--option=value`.

Examples

Example of the `install` command:

```
diffdogserver install
```


5.6 licenseserver

On execution, the `licenseserver` command registers DiffDog Server with the LicenseServer specified by the `Server-Or-IP-Address` argument. For the `licenseserver` command to be executed successfully, the two servers must be connected on the network and LicenseServer must be running. You must have administrator privileges to be able to register DiffDog Server with LicenseServer.

Once DiffDog Server has been successfully registered with LicenseServer, you will receive a message to this effect. The message will also display the URL of the LicenseServer. You can now go to LicenseServer to assign DiffDog Server a license. For details about licensing, see the LicenseServer documentation (<https://www.altova.com/documentation>).

Syntax

```
diffdogserver licenseserver [options] Server-Or-IP-Address
```

▼ Casing and slashes on the command line

`DiffDogServer` on Windows
`diffdogserver` on Unix (Linux, Mac)

- * Note that lowercase (`diffdogserver`) works on all platforms (Windows, Linux, and Mac), while upper-lower (`DiffDogServer`) works only on Windows and Mac.
- * Use forward slashes on Linux and Mac, backslashes on Windows.

Argument	Description
<code>Server-Or-IP-Address</code>	Identifies the machine on the network on which Altova LicenseServer is installed and running. It can be the machine's name or its IP address.

Option	Description
<code>--j, --json</code>	Values are <code>true false</code> . Prints the result of the registration attempt as a machine-parsable JSON object.
<code>--h, --help</code>	Displays information about the command

Options are listed in their short forms (if available) and long forms. You can use one or two dashes for both short and long forms. An option that takes a value is written like this: `--option=value`.

Examples

Examples of the `licenseserver` command:

```
diffdogserver licenseserver DOC.altova.com
```

```
diffdogserver licenseserver localhost  
diffdogserver licenseserver 127.0.0.1
```

The commands above specify, respectively, the machine named `DOC.altova.com`, and the user's machine (`localhost` and `127.0.0.1`) as the machine running Altova LicenseServer. In each case, the command registers DiffDog Server with the LicenseServer on the machine specified.

5.7 start

The `start` command starts DiffDog Server as a service on the server machine.

Note: If DiffDog Server is not installed as a service, you can install it with the [install](#) command, which is not the same as starting the service. To uninstall DiffDog Server as a service, use the [uninstall](#) command.

Syntax

```
diffdogserver start [options]
```

▼ Casing and slashes on the command line

`DiffDogServer` on Windows

`diffdogserver` on Unix (Linux, Mac)

* Note that lowercase (`diffdogserver`) works on all platforms (Windows, Linux, and Mac), while upper-lower (`DiffDogServer`) works only on Windows and Mac.

* Use forward slashes on Linux and Mac, backslashes on Windows.

Option	Description
<code>--h, --help</code>	Displays information about the command

Options are listed in their short forms (if available) and long forms. You can use one or two dashes for both short and long forms. An option that takes a value is written like this: `--option=value`.

Examples

Examples of the `start` command:

```
diffdogserver start
```

5.8 uninstall

The `uninstall` command uninstalls DiffDog Server as a service on the server machine. To re-install DiffDog Server as a service, use the [install](#) command.

Syntax

```
diffdogserver uninstall [options]
```

▼ Casing and slashes on the command line

DiffDogServer on Windows

diffdogserver on Unix (Linux, Mac)

* Note that lowercase (`diffdogserver`) works on all platforms (Windows, Linux, and Mac), while upper-lower (`DiffDogServer`) works only on Windows and Mac.

* Use forward slashes on Linux and Mac, backslashes on Windows.

Option	Description
<code>--h, --help</code>	Displays information about the command

Options are listed in their short forms (if available) and long forms. You can use one or two dashes for both short and long forms. An option that takes a value is written like this: `--option=value`.

Examples

Examples of the `uninstall` command:

```
diffdogserver uninstall
```

▼ Casing and slashes on the command line

DiffDogServer on Windows

diffdogserver on Unix (Linux, Mac)

* Note that lowercase (`diffdogserver`) works on all platforms (Windows, Linux, and Mac), while upper-lower (`DiffDogServer`) works only on Windows and Mac.

* Use forward slashes on Linux and Mac, backslashes on Windows.

5.9 verifylicense (Windows only)

Checks whether the current product is licensed. Additionally, the `--license-key` option enables you to check whether a specific license key is already assigned to the product. This command is supported only on Windows systems. It is not supported on Linux or Mac systems. For details about licensing, see the LicenseServer documentation (<https://www.altova.com/documentation>).

Syntax

```
DiffDogServer verifylicense [options]
```

▼ Casing and slashes on the command line

```
DiffDogServer on Windows
diffdogserver on Unix (Linux, Mac)
```

- * Note that lowercase (`diffdogserver`) works on all platforms (Windows, Linux, and Mac), while upper-lower (`DiffDogServer`) works only on Windows and Mac.
- * Use forward slashes on Linux and Mac, backslashes on Windows.

Option	Description
<code>--l, license-key</code>	The license key to check: whether it has been assigned to the product
<code>--h, --help</code>	Displays information about the command

Options are listed in their short forms (if available) and long forms. You can use one or two dashes for both short and long forms. An option that takes a value is written like this: `--option=value`.

Examples

Examples of the `verifylicense` command:

```
diffdogserver verifylicense
diffdogserver verifylicense --license-key=ABCDEFGH-IJKLMNOP-OPQRSTU-VWXYZ12-3456789
```

The commands above check, respectively, whether the product has been licensed, and whether the product has been licensed with the license key given as the value of the `--license-key` option.

Chapter 6

DiffDog Client Command Line

6 DiffDog Client Command Line

This chapter describes the commands exposed by the DiffDog Command Line Client.

- [aliases](#)
- [diff](#)
- [import](#)
- [showcfg](#)

To display help for any of these commands directly at the command line, use:

```
DiffDogCmdlClient help <command>
```

On Linux, use an all-lowercase to call the executable. In addition, on Linux and OS X/ macOS, when you are inside the directory of the executable, you might need to add the prefix `./` before the name of the executable.

For the path to the DiffDog Command Line Client (abbreviated as *DiffDogCmdlClient*), see [How It Works](#).

6.1 aliases

If the server administrator has restricted access to server paths for security reasons, you can no longer run comparisons that refer server file paths directly, see also [Restricting Access to Server Paths](#). Instead, you need to specify the name of an alias by means of the `--alias` option.

This command outputs all the aliases defined on the server side. The output of this command depends on the value of the `hide-alias-paths` option in the [server configuration file](#). If `hide-alias-paths=false`, the output displays all aliases along with the paths they reference. Otherwise, the command returns just the list of configured aliases.

You can also call this command by typing `list-aliases` instead of `aliases`.

Syntax

```
DiffDogCmdlClient aliases
```

On Linux, use an all-lowercase to call the executable. In addition, on Linux and OS X/ macOS, when you are inside the directory of the executable, you might need to add the prefix `./` before the name of the executable.

6.2 diff

The `diff` command performs a side-by-side comparison of two files, directories, or URLs. The entities to be compared can be of different kinds (for example, you can compare a URL like `http://server/file.txt` to a file path like `C:\file.txt`). Note that it is valid to compare files with URLs, for example, but not files and directories (or URLs and directories).

Comparison of Microsoft Word 2003 or later documents (.docx, .dotx) is also supported, see [Comparing Word Documents](#).

Most often, a comparison involves a "left" side and a "right" side to compare; however, three-way comparisons are also possible when comparing files or URLs (not directories). The files or directories to be compared can be on a machine where DiffDog Client runs or on the remote machine where DiffDog Server runs. A combined approach (comparison of local files or directories with remote ones) is also possible.

Syntax

```
DiffDogCmdlClient diff [options] [path path [path]]
```

On Linux, use an all-lowercase to call the executable. In addition, on Linux and OS X/ macOS, when you are inside the directory of the executable, you might need to add the prefix `./` before the name of the executable.

For the path to the DiffDog Command Line Client (abbreviated as *DiffDogCmdlClient*), see [How It Works](#).

This command can also be called using the `compare` alias. You can use `compare` and `diff` interchangeably.

Arguments

path

A *path* may be a file or directory path, or a URL path in the format `http://server/segment`.

Supplying paths as arguments is just one of the two ways to pass input paths to the `diff` command. The second way to supply paths is by setting the options `--client-left`, `--client-right`, or `--server-left`, `--server-right`. Use the second approach if DiffDog Client does not run on the same machine as DiffDog Server.

In other words, if you set the options `--client-left`, `--client-right`, or `--server-left`, `--server-right`, then no paths must be specified as arguments. Otherwise, two paths exactly must be supplied as argument. (To perform a three-way comparison, three paths can be specified as arguments.)

Options

The options applicable to the `diff` command are listed below.

You can specify defaults for most of the options below in the [client configuration file](#). If you

use a client configuration file, note the following:

- When an option is set at the command line but it is commented out in client configuration file, the command line option applies.
- When an option is set both at the command line and in client configuration file, the command line option applies.
- When an option is not set at the command line but is set (uncommented) in configuration file, the configuration file option applies.
- When an option is set neither at the command line nor in the configuration file, it takes the default value as described in the command line help and in the documentation below.

--alias, --a

If the server administrator has restricted access to server paths for security reasons, you can no longer run comparisons that refer server file paths directly, see also [Restricting Access to Server Paths](#). Instead, you need to specify the name of an alias by means of the `--alias` option.

This option is meaningful if the comparison involves a server path (that is, if options `--server-left` or `--server-right` are set). Valid values for this option are aliases as defined in the [Server Configuration File](#). To output the list of available aliases, run the `aliases` command. For more information, see [Restricting Access to Server Paths](#).

--config, --c

This option specifies the path to a client configuration file. For more information, see [Client Configuration File](#).

If you do not set the `--c` option, the DiffDog Command Line Client executable attempts to read the client configuration file from the same directory. If there is no configuration file in the same directory as the executable, the default values as described in the command line help and this documentation apply.

--client-left, --cl

This option specifies the left side of the comparison (must be a path to a local file or directory).

--client-middle, --cm

This option is applicable in a 3-way comparison. It specifies the local path to the "middle" file (also known as the "common ancestor").

--client-right, --cr

This option specifies the right side of the comparison (must be a path to a local file or directory).

--dir-compare-contents, --dc

This option specifies if directory comparison should compare file contents in addition to any other options that might be set separately (such as file size and modification date). When this option is **false**, the comparison ignores file contents (this will result in a faster, though less accurate, comparison). By default, this option is **false**.

--directory-filter, --df

This option is applicable for directory comparisons. Directory filters enable you to include or exclude certain files or sub-directories from the comparison based on criteria you define. Valid

values for this option are directory filters as they are defined in the [Client Configuration File](#), in the **[dir.filter]** group. For example, if the configuration file defines a filter **[dir.filter:svn]**, use the following syntax to set the filter at the command line:

```
--directory-filter=svn
```

On Windows, when DiffDog is installed on the same machine as DiffDog Server, you can specify as option value any directory filter that already exists in DiffDog (either built-in or custom). For example, to set the built-in filter "No SVN directories" at the command line, use the following syntax:

```
--directory-filter="No SVN directories"
```

To view or create a directory filter in DiffDog:

1. On the **Tools** menu, click **DiffDog Options**.
2. Click the **Directory Comparison** tab.

For more information about creating directory filters with DiffDog, refer to DiffDog documentation (<https://www.altova.com/documentation>).

If the filter cannot be found, an error occurs and no comparison takes place.

--di, --dir-compare-mod-times-ignore-seconds

This option is applicable for directory comparisons. It specifies that directory comparison should ignore the given number of seconds (+/-) when comparing modification times. By default, it is set to **0**, which means the comparison will not ignore modification time differences.

--dic, --dir-ignore-case

This option is applicable for directory comparisons. By default, this value is **true**, which means that the comparison ignores the case in file or directory names. For example, a directory "SomeDir" would be equal to "somedir", or a file "somefile.txt" would be equal to "SomeFile.txt" (assuming that their content is also equal).

To take the case of file or directory names into account when comparing, set the option to **false**.

--dir-compare-sizes, --ds

This option is applicable for directory comparisons. When set to **true**, it specifies that directory comparison should compare files by size. Otherwise, this comparison criterion is ignored. By default, this option is **false**.

--dir-compare-mod-times, --dt

This option is applicable for directory comparisons. When set to **true**, it specifies that directory comparison should compare files within a directory by modification time. Otherwise, this comparison criterion is ignored. By default, this option is **false**.

--doc-format-bold, --dfb

This option is applicable for comparison of Word documents. Valid values:

true	Take bold formatting into account during comparison.
-------------	--

false	(Default) Ignore bold formatting.
--------------	-----------------------------------

--doc-format-font-color, --dfc

This option is applicable for comparison of Word documents. Valid values:

true	Take font color into account during comparison.
false	(Default) Ignore font color.

--doc-format-font-name, --dff

This option is applicable for comparison of Word documents. Valid values:

true	Take font name into account during comparison.
false	(Default) Ignore font name.

--doc-format-font-size, --dfs

This option is applicable for comparison of Word documents. Valid values:

true	Take font size into account during comparison.
false	(Default) Ignore font size.

--doc-format-italic, --dfi

This option is applicable for comparison of Word documents. Valid values:

true	Take italic formatting into account during comparison.
false	(Default) Ignore italic formatting.

--doc-format-underline, --dfu

This option is applicable for comparison of Word documents. Valid values:

true	Take underline formatting into account during comparison.
false	(Default) Ignore underline formatting.

--doc-ignore-blank-lines, --dib

This option is applicable when comparing Word documents or directories containing Word documents. In case of directory comparisons, the option will apply only to Word documents in that directory. Valid values:

true	Take blank lines into account during comparison.
false	(Default) Ignore blank lines.

--doc-ignore-case, --doc

This option is applicable when comparing Word documents or directories containing Word

documents. In case of directory comparisons, the option will apply only to Word documents in that directory. Valid values:

true	Take case into account during comparison.
false	(Default) Ignore case.

--doc-mode, --dm

This option is applicable for comparison of Word documents. Valid values:

sentence	(Default) Perform comparison at sentence level.
paragraph	Perform comparison at paragraph level.

--doc-whitespacemode, --dws

This option is applicable when comparing Word documents or directories containing Word documents. In case of directory comparisons, the option will apply only to Word documents in that directory.

The option defines how whitespace characters should be treated for comparison. Whitespace characters are any of the following: space, tab, carriage return, and line feed. Not specifying this option means that whitespace characters are always relevant for comparison. Otherwise, set one of the following values:

normalize	Text A is equal to Text B if, after normalization, characters in Text A correspond to those in Text B. "Normalization" means that multiple consecutive occurrences of whitespace characters are replaced by a single space character. In addition, the leading and trailing whitespace characters are trimmed for each line of text.
strip	Text A is considered equal to Text B if, after stripping whitespace characters, characters in Text A correspond to those in Text B. In other words, any whitespace characters are stripped from the text and considered not relevant for comparison.

--ignore-blank-lines, --ib

This option specifies if blank lines should be ignored in comparison. Valid values are **true** and **false**. By default, this value is **false**.

The option applies depending on the current `--mode` option. If `--mode=text`, it applies to text files, and is equivalent to the `--text-ignore-blank-lines` option. If `--mode=xml`, it does not affect the comparison. If `--mode=doc`, it applies to Word documents and is equivalent to `--doc-ignore-blank-lines` option. If you do a directory comparison, it applies to each kind of comparison that might occur in that directory.

--ignore-case, --ic

This option is applicable to both file and directory comparisons. The option applies depending on the current `--mode` option. If `--mode=text`, it applies to text files, and is equivalent to the `--text-ignore-case` option. If `--mode=xml`, it applies to XML files and is equivalent to `--xml-ignore-case-in-names` and `--xml-ignore-case-in-text` options. If `--mode=doc`, it applies to Word documents and is equivalent to `--doc-ignore-case` option. If you do a directory comparison, it

applies to each kind of comparison that might occur in that directory. Valid values:

true	Perform a case-insensitive comparison (for example, "A" and "a" are treated as equal).
false	(Default) Perform a case-sensitive comparison (for example, "A" and "a" are not treated as equal).

--mode, --m

This option specifies the comparison type to be performed. Valid values:

auto	(Default) Let the application determine if the supplied arguments are files or directories and set the comparison mode automatically based on file extension. For example, if files are detected to be XML, then an XML comparison is performed. You can always view or change the default mapping between specific file extensions and comparison modes, see Client Configuration File .
binary	Treat files as binary.
doc	Treat files as Microsoft Word documents.
text	Treat files as text.
xml	Treat files as XML.

--output-file, --o

This option enables you to write the command output to a text file on the client machine. The value must specify a valid file path on the client machine. Use the `--om` option to set the output file format.

--output-mode, --om

This option lets you specify the format in which the comparison output is to be created (text or XML). Valid values:

auto	(Default) Let the application decide.
text	Write output file as text. Note: The option <code>--output-mode=text</code> is not supported when comparing XML files. If you set the <code>--output-mode</code> to text when comparing XML files, no differences will be reported in the standard output. If you additionally set the <code>--output-file</code> option, a zero-sized output file will be created.
xml	Write output file as XML.

--port

This option specifies the port on which DiffDog Server listens for requests. Setting this option is meaningful if DiffDog Server runs on a port other than the default **29800**. As an alternative to setting this option at the command line, you can set it in the [Client Configuration File](#). Note that, if you set this value at the command line, it takes precedence over the one defined in the configuration file.

--quiet, --q

Prevents the standard output from being displayed at the command line. Valid values:

true	Do not display standard output in the terminal window.
false	(Default) Display standard output in the terminal window.

--server-output-file, --s

This option enables you to write the command output to a text file on the server machine. The value must specify a valid file path on the server machine. Use the `--om` option to set the output file format.

--server

This option specifies the server address on which DiffDog Server listens for requests. Setting this option is meaningful if DiffDog Server runs on a server other than the default **localhost**. As an alternative to setting this option at the command line, you can set it in the [Client Configuration File](#). Note that, if you set this value at the command line, it takes precedence over the one defined in the configuration file.

--server-left, --sl

This option enables you to add a remote path to the comparison. It specifies the left side of the comparison (a path to a file or directory accessible to the server).

--server-middle, --sm

This option enables you to add a remote path to the comparison. It specifies the middle side of the comparison (applicable in a 3-way comparison). The value must be a path to a file or directory accessible to the server.

--server-right, --sr

This option enables you to add a remote path to the comparison. It specifies the right side of the comparison (a path to a file or directory accessible to the server).

--text-ignore-case, --tic

This option is applicable when comparing text documents or directories containing text documents. In case of directory comparisons, the option will apply only to text files in that directory. Valid values:

true	Perform a case-insensitive comparison (for example, "A" and "a" are treated as equal).
false	(Default) Perform a case-sensitive comparison (for example, "A" and "a" are not treated as equal).

--text-ignore-blank-lines, --tib

This option is applicable when comparing text documents or directories containing text documents. In case of directory comparisons, the option will apply only to text files in that directory. The option specifies if blank lines should be ignored in comparison, when comparing text files. Valid values are **true** and **false**. By default, this value is **false**.

--text-whitespace-mode, --tws

This option is applicable when comparing text documents or directories containing text

documents. In case of directory comparisons, the option will apply only to text files in that directory.

The option defines how whitespace characters should be treated for comparison. Whitespace characters are any of the following: space, tab, carriage return, and line feed. Not specifying this option means that whitespace characters are always relevant for comparison. Otherwise, set one of the following values:

normalize	Text A is equal to Text B if, after normalization, characters in Text A correspond to those in Text B. "Normalization" means that multiple consecutive occurrences of whitespace characters are replaced by a single space character. In addition, the leading and trailing whitespace characters are trimmed for each line of text.
strip	Text A is considered equal to Text B if, after stripping whitespace characters, characters in Text A correspond to those in Text B. In other words, any whitespace characters are stripped from the text and considered not relevant for comparison.

--whitespace-mode, --ws

This option is applicable to file and directory comparisons. The option applies depending on the current `--mode` option. If `--mode=text`, it applies to text files, and is equivalent to the `--text-whitespace-mode` option. If `--mode=xml`, it applies to XML files. If `--mode=doc`, it applies to Word documents and is equivalent to `--doc-whitespace-mode` option. If you do a directory comparison, it applies to each kind of comparison that might occur in that directory based on the file extension.

The option defines how whitespace characters should be treated for comparison. Whitespace characters are any of the following: space, tab, carriage return, and line feed. Not specifying this option means that whitespace characters are always relevant for comparison. Otherwise, set one of the following values:

normalize	Text A is equal to Text B if, after normalization, characters in Text A correspond to those in Text B. "Normalization" means that multiple consecutive occurrences of whitespace characters are replaced by a single space character. In addition, the leading and trailing whitespace characters are trimmed for each line of text. If the compared files are XML, the leading and trailing whitespace characters in attribute values are trimmed.
strip	Text A is considered equal to Text B if, after stripping whitespace characters, characters in Text A correspond to those in Text B. In other words, any whitespace characters are stripped from the text and considered not relevant for comparison. If the compared files are XML, whitespace characters that are outside attribute or element values are disregarded for comparison.


--xml-filter, --xf

This option is applicable for XML comparisons. An XML filter contains rules that ignore specific XML attributes or elements for comparison. Valid values for this option are XML filters as they are

defined in the [Client Configuration File](#), in the **[xml.filter]** group. For example, if the configuration file defines a filter **[xml.filter:ignore-abc-elems]**, use the following syntax to set the filter at the command line:

```
--xml-filter=ignore-abc-elems
```

On Windows, when DiffDog is installed on the same machine as DiffDog Server, you can specify as option value any XML filter created with DiffDog. To view or define an XML filter in DiffDog, take the following steps:

1. On the **Tools** menu, click **Comparison Options**.
2. Click the **XML** tab.
3. Locate the option **Filter out specific elements/attributes**, and the click the **Ellipsis**  button .

For more information about creating XML filters with DiffDog, refer to DiffDog documentation (<https://www.altova.com/documentation>).

If the filter cannot be found, an error occurs and no comparison takes place.

--xml-ignore-case-in-names, --xicin

This option is applicable when comparing XML files or directories containing XML files. In case of directory comparisons, the command will apply only to XML files in that directory.

When set to **true**, a case-insensitive comparison of XML identifier names will be performed. For example, let's assume that you want to compare the following XML files:

```
<book ID="1" />
```

```
<book id="1" />
```

In the listing above, the attribute **ID** is uppercase in the left file and lowercase in the right file. If `--xml-ignore-case-in-names=true`, case is ignored, so the files above are treated as equal. By default, this option is **false**, which means files such as the ones above are not equal.

--xml-ignore-case-in-text, --xicit

This option is applicable when comparing XML files or directories containing XML files. In case of directory comparisons, the command will apply only to XML files in that directory.

When set to **true**, a case-insensitive comparison of non-markup text will be performed. For example, let's assume that you want to compare the following XML files:

```
<book hardcover="yes">
  <genre>fiction</genre>
</book>
```

```
<book hardcover="Yes">
  <genre>Fiction</genre>
</book>
```

In the listing above, the value of attribute **hardcover** is lowercase in the left file and capitalized in the right file. The same is true for the value of the **genre** element. To treat these two files as equal, set `--xml-ignore-case-in-text=true`. By default, this option is **false**, which means files such as the ones above are not equal.

--xml-ignore-markup-attributes, --xima

This option is applicable when comparing XML files. Valid values:

true	Ignore XML attributes when comparing.
false	(Default) Take XML attributes into account when comparing.

--xml-ignore-markup-comments, --ximc

This option is applicable when comparing XML files. Valid values:

true	Ignore XML comments when comparing.
false	(Default) Take XML comments into account when comparing.

--xml-ignore-markup-cdata, --ximcd

This option is applicable when comparing XML files. Valid values:

true	Ignore XML character data (CDATA) when comparing.
false	(Default) Take XML CDATA into account when comparing.

--xml-ignore-markup-doctype, --ximd

This option is applicable when comparing XML files. Valid values:

true	Ignore XML DOCTYPE declaration when comparing.
false	(Default) Take XML DOCTYPE declaration into account when comparing.

--xml-ignore-markup-processing-instructions, --ximpi

This option is applicable when comparing XML files. Valid values:

true	Ignore XML processing instructions when comparing.
false	(Default) Take XML processing instructions into account when comparing.

--xml-ignore-markup-xml, --ximx

This option is applicable when comparing XML files. Valid values:

true	Ignore XML declarations when comparing.
false	(Default) Take XML declarations into account when comparing.

--xml-ignore-namespace, --xins

This option is applicable when comparing XML files. When set to **true**, XML namespaces will be ignored. By default, this option is **false**.

--xml-ignore-prefixes, --xip

This option is applicable when comparing XML files. When set to **true**, XML prefixes will be ignored. By default, this option is **false**.

--xml-ignore-text, --xit

This option is applicable when comparing XML files. When set to **true**, the text content of XML nodes will be ignored for comparison. This is useful if you want to compare only the structure of two XML files, disregarding the actual node content. By default, this option is **false**.

--xml-order-by-attributes, --xoba

This option is applicable when comparing XML files. Set this option to **true** if you want all XML attributes to be ordered before comparison. For example, let's assume that you want to compare the following two XML files:

<pre><book author="Franz Kafka" title="The Metamorphosis" /></pre>	<pre><book title="The Metamorphosis" author="Franz Kafka" /></pre>
--	--

In the listing above, the order of attributes is different in both files, although the attributes are the same. If you set the option `--xml-order-by-attributes` to **true**, the application will order attributes before comparison, and, consequently, the files will be reported as equal. The default value is **false**, meaning that files are not equal if the order of attributes is not the same.

--xml-order-by-elements, --xobe

This option is applicable when comparing XML files. Set this option to **true** if you want all XML elements to be ordered before comparison. For example, let's assume that you want to compare the following two XML files:

<pre><book> <author>Franz Kafka</author> <title>The Metamorphosis</title> </book></pre>	<pre><book> <title>The Metamorphosis</title> <author>Franz Kafka</author> </book></pre>
---	---

In the listing above, the left and right files contain exactly the same elements, only in a different order. If you set the option `--xml-order-by-elements` to **true**, the application will order all elements before comparison, and consequently, the files will be reported as equal. The default value is **false**, meaning that files are different if the order of elements is different.

--xml-order-by-attribute-list, --xobl

This option is applicable when comparing XML files. There are instances where multiple elements have exactly the same name and attributes, but attribute values are different. To sort by specific attributes before comparing, set this option to a named list of attributes created in the [Client Configuration File](#), in the `[xml.orderby:<name_of_your_list>]` group.

For example, let's assume that you want to compare the following two XML files:

<pre><data> <phone type="work" ext="111" /> <phone type="work" ext="222" /> <phone type="work" ext="333" /> </data></pre>	<pre><data> <phone type="work" ext="333" /> <phone type="work" ext="111" /> <phone type="work" ext="222" /> </data></pre>
---	---

In the listing above, the left and right files are not equal. However, if you ordered all **phone** elements by **ext** attribute, then the files would become equal. To make such comparisons

possible, first modify the client configuration file as follows:


```
;; an example attributes list
[xml.orderby:mylist]
attributes = ext
```

You can now run the `diff` command with the option `--xml-order-by-attribute-list=mylist`. When you do this, the application orders elements by **ext** attribute, and, as a result, the files are reported as equal. If the option `--xml-order-by-attribute-list` is not set, files such as the ones above would be reported as NOT equal.

As an alternative, to order by all attributes, set the option `--xml-order-by-attributes=true` instead of setting this option.

Note: If you set the `--xml-order-by-attribute-list` option, make sure to also set the `--xml-order-by-elements=true`.

On Windows, when DiffDog is installed on the same machine as DiffDog Server, you can set this option to a custom attribute list created in DiffDog. To view or create a custom attribute list in DiffDog:

1. On the **Tools** menu, click **Comparison Options**.
2. Click the **XML** tab.
3. Select the **Ignore order of child nodes** check box.
4. Click **Specific attributes**, and then click the **Ellipsis**  button.

For more information about creating custom attribute lists with DiffDog, refer to DiffDog documentation (<https://www.altova.com/documentation>).

`--xml-order-by-text, --xobt`

This option is applicable when comparing XML files. There are instances where multiple elements have exactly the same name and attributes; only the text of elements is different. Set this option to **true** if you want to order such elements by their inner text before comparison. For example, let's assume that you want to compare the following files:

<pre><data> <phone type="mobile">111</phone> <phone type="mobile">222</phone> </data></pre>	<pre><data> <phone type="mobile">222</phone> <phone type="mobile">111</phone> </data></pre>
---	---

In the listing above, the left and right files are not equal. However, if you set the option `--xml-order-by-text` to **true**, the application would order elements by their text, and, as a result, the files would be reported as equal. The default value is **false**, meaning that ordering of elements by text does not take place, and files such as the ones above are not equal.

Note: If you set the `--xml-order-by-text` option, make sure to also set the `--xml-order-by-elements=true`.

`--xml-resolve-entities, --xre`

This option is applicable when comparing XML files. When set to **true**, then all entities in the document are resolved. Otherwise, the files are compared with the entities as is. By default, this

option is **false**.

--zip-as-dir, --zd

This option is applicable when comparing ZIP files. When set to true, ZIP files will be treated as directories instead of binary files. By default, this option is **false**.

Examples

See [Running Comparisons](#).

6.3 import

The `import` command runs a comparison provided that it is given a `*.dirdif` (directory comparison) or `*.filedif` (file comparison) file as argument. You can create such files with Altova DiffDog desktop application (<https://www.altova.com/diffdog>), by saving any file or directory comparison to a `.filedif` or `.dirdif` file.

When you run this command, the outcome of the comparison is reported by the return error code (**0** = no differences, **1** = differences, **2** = error), similar to how it works with the `diff` command. The output is displayed directly at the command line, unless you suppress it with the `--quiet` option. You can optionally redirect the output (the comparison result) to a report file in XML or text format. The path of the report file is defined from the graphical user interface of DiffDog desktop application. Namely, in DiffDog, you can set the output path of a `.filedif` or `.dirdif` comparison as follows:

1. Open an existing `.dirdif` or `.filedif` file (or create a new comparison) in DiffDog.
2. On the **Tools** menu, click **Comparison Document Options**.
3. Do one of the following:
 - a. To use no redirection to a file, click **No Export** (this is the default option).
 - b. To redirect the report to a text file, click **Text file**, and then enter the path in the adjacent text box.
 - c. To redirect the report to an XML file, click **XML file**, and then enter the path in the adjacent text box.
4. On the **File** menu, click **Save As**, and then save the comparison as `.filedif` (or `.dirdif`, if applicable).

You can now run the `.filedif` or `.dirdif` file with DiffDog Server, as shown below.

Syntax

```
DiffDogCmdlClient import comparison-file1 [comparison-file2 [comparison-fileN]]
```

The `import` command can also be called using the `load` alias. You can use `import` or `load` interchangeably.

On Linux, use an all-lowercase to call the executable. In addition, on Linux and OS X/ macOS, when you are inside the directory of the executable, you might need to add the prefix `./` before the name of the executable.

Arguments

comparison-file

Specifies the path to a comparison file in `.dirdif` or `.filedif` format. The path of the comparison file can be absolute or relative to the current working directory. You can supply as many comparison files as arguments as required. This is limited only by the number of input characters supported by your command shell.

Options

--quiet, -q

Prevents the standard output from being displayed at the command line. Valid values:

true	Do not display standard output in the terminal window.
false	(Default) Display standard output in the terminal window.

Example

Assuming that you would like to run the comparison file **C:\DiffDog\Comparison1.filedif**, use the following command:

```
DiffDogCmdlClient import C:\DiffDog\Comparison1.filedif
```

Assuming that you would like to run the comparison file **Comparison1.filedif** and **Comparison2.dirdif** (both located in **C:\DiffDog** directory), use the following command:

```
DiffDogCmdlClient import C:\DiffDog\Comparison1.filedif C:\DiffDog  
\Comparison2.dirdif
```


6.4 showcfg

The `showcfg` command outputs all the current DiffDog Client options in a human readable form. The listed options are grouped into the following categories:

- **Application** - This group lists any options that you've defined in the [client configuration file](#)
- **Registry** - (Windows-specific) This group lists options that exist in the Windows registry. This is the case if DiffDog is installed on the same machine. Any custom XML or directory filters that you created in DiffDog also appear here, see the [--directory-filter](#) and [--xml-filter](#) options. Any "order by" attribute lists that you created in DiffDog also appear here, see the [--xml-order-by-attribute-list](#) option.
- **Built-In** - This group lists options that are built into the executable. The application will default to these options when no others exist.

Syntax

```
DiffDogCmdlClient showcfg [options] [all]
```

On Linux, use an all-lowercase to call the executable. In addition, on Linux and OS X/ macOS, when you are inside the directory of the executable, you might need to add the prefix `./` before the name of the executable.

Arguments

all

Output all configuration options. This argument is optional.

Options

The options applicable to the `showcfg` command are listed below.

--c, --config

This option specifies the path to a client configuration file. For more information, see [Client Configuration File](#).

Index

B

Binary files,

- comparing, 43
- handling the output, 43
- viewing comparison results, 43

C

Command line,

- handling output, 43
- redirecting output to file, 43
- suppressing verbose output, 43

Command line usage, 48

Commands,

- help, 54
- licenseserver, 57

compare,

- as command, 66

Comparison,

- exporting results, 44
- running, 40
- specifying three files as input, 40

Configuration,

- client configuration file, 29
- server configuration file, 26

D

diff,

- as command, 66

DiffDog Command Line Client,

- configuring, 29
- how it works, 9
- running comparisons, 40

DiffDog Server,

- features, 7
- how it works, 9
- system requirements, 7

E

Export,

- comparison results as text, 43, 44
- comparison results as XML, 43, 44

H

help command, 54

L

licenseserver command, 57

Linux,

- installing DiffDog Server on, 12
- starting and stopping the DiffDog Server service, 36
- uninstalling DiffDog Server from, 13
- viewing currently installed products, 13

load,

- as command, 79

M

macOS,

- installing DiffDog Server on, 15
- starting and stopping the DiffDog Server service, 37
- uninstalling DiffDog Server from, 16

O

OS X,

- installing DiffDog Server on, 15
- starting and stopping the DiffDog Server service, 37
- uninstalling DiffDog Server from, 16

R

run,
as command, 79

S

Security,
restricting access to server paths, 25

Service,
configuration on Windows, 18
starting and stopping on Linux, 36
starting and stopping on Mac, 37
starting and stopping on Windows, 38

T

Text files,
comparing, 40, 43
handling the output, 43

W

Windows,
configuring DiffDog Server as a service, 18
installing DiffDog Server on, 17
starting and stopping the DiffDog Server service, 38

Word documents,
comparing, 42

X

XML,
viewing comparison results as, 44

XML files,
comparing, 40